

# INTERNATIONAL SEARCH REPORT

Internationa Application No  
PCT/NL 03/00718

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K31/565 A61K31/352 A61P35/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 340 585 A (PIKE MALCOLM C ET AL) 23 August 1994 (1994-08-23) cited in the application column 12, line 25-44; table 1 claims 1,4,13 column 13, line 67 column 15, line 1	1-13
X	WO 94 26207 A (UNIV SOUTHERN CALIFORNIA) 24 November 1994 (1994-11-24) page 17, line 9-30; table 1 claims 1,4,13 page 19, last line	1-13
	--- -/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

6 February 2004

Date of mailing of the international search report

20/02/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Veronese, A

# INTERNATIONAL SEARCH REPORT

Internat  
pplication No  
PCT/NL 03/00718

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 340 584 A (PIKE MALCOLM C ET AL) 23 August 1994 (1994-08-23) column 7, line 13 column 14, line 11-43 column 16, line 11 column 17, line 30 claims 1,4,16; table 1 ----	1-13
A	KUHNEL R ET AL: "ANDROGEN DEPENDENCY OF HUMAN OVARIAN CANCER MAY BE DUE TO A PARA OR AUTOCRINE ACTION" ANTICANCER RESEARCH, vol. 5, no. 6, 1985, page 603 XP009025474 FIRST INTERNATIONAL CONFERENCE OF ANTICANCER RESEARCH, LOUTRAKI, GREECE, OCT. 26-30, 1985. ANTICANCE ISSN: 0250-7005 the whole document ----	1-13
T	US 2003/203933 A1 (ISHIDA JUNKO ET AL) 30 October 2003 (2003-10-30) paragraphs '0033!, '0034! ----	1-13
Y	COFFEY D S: "SIMILARITIES OF PROSTATE AND BREAST CANCER: EVOLUTION, DIET, AND ESTROGENS" UROLOGY, BELLE MEAD, NJ, US, vol. 57, no. 4A, SUPPL, April 2001 (2001-04), pages 31-38, XP001027445 ISSN: 0090-4295 the whole document ----	10
Y	LOPEZ-OTIN C ET AL: "Breast and prostate cancer: An analysis of common epidemiological, genetic, and biochemical features" ENDOCRINE REVIEWS, BALTIMORE, MD, US, vol. 19, no. 4, August 1998 (1998-08), pages 365-396, XP002220464 the whole document ----	10
Y	WO 01 32683 A (TORCAN CHEMICAL LTD ;SLEMON CLARKE (CA)) 10 May 2001 (2001-05-10) page 1, line 1-9 ----	14-18
Y	WO 93 09771 A (SCHERING CORP) 27 May 1993 (1993-05-27) page 1, line 28-30 ----	14-18
	----- -/-- -----	

# INTERNATIONAL SEARCH REPORT

Intern: pplication No  
PCT/NL 03/00718

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MOBBS B G ET AL: "SUPPRESSION OF THE GROWTH OF THE ANDROGEN-INSENSITIVE R3327 HI RAT PROSTATIC CARCINOMA BY COMBINED ESTROGEN AND ANTIPROGESTIN TREATMENT" JOURNAL OF STEROID BIOCHEMISTRY AND MOLECULAR BIOLOGY, ELSEVIER SCIENCE LTD., OXFORD, GB, vol. 39, no. 5A, 1991, pages 713-722, XP001105437 ISSN: 0960-0760 the whole document	1-19
A	EP 1 120 114 A (PFIZER PROD INC) 1 August 2001 (2001-08-01) the whole document	1-12
A	LIPPERT CAROLINE ET AL: "The effects of A-ring and D-ring metabolites of estradiol on the proliferation of vascular endothelial cells" LIFE SCIENCES, PERGAMON PRESS, OXFORD, GB, vol. 67, no. 13, 18 August 2000 (2000-08-18), pages 1653-1658, XP002200988 ISSN: 0024-3205 See table 1, estetrol the whole document page 1657, last paragraph	1-12
A	US 4 937 238 A (LEMON HENRY M) 26 June 1990 (1990-06-26) column 1, line 63 -column 2 column 3, line 19-25	1-12
A	US 5 468 736 A (HODGEN GARY D) 21 November 1995 (1995-11-21) column 3, line 5-10 example 3 claims	1-12
A	MUECK A O ET AL: "ANGIOGENETIC AND ANTI-ANGIOGENETIC EFFECTS OF ESTRADIOL AND ITS METABOLITES" JOURNAL OF CLINICAL AND BASIC CARDIOLOGY, XX, AU, vol. 4, 2001, pages 153-155, XP008004903 ISSN: 1561-2775 * See table 1, estetrol * page 154, column 1	1-12
	-/--	

# INTERNATIONAL SEARCH REPORT

Internal Application No  
PCT/NL 03/00718

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>HOLINKA C F ET AL: "IN VIVO EFFECTS OF ESTETROL ON THE IMMATURE RAT UTERUS" BIOLOGY OF REPRODUCTION, SOCIETY FOR THE STUDY OF REPRODUCTION, CHAMPAIGN, IL, US, vol. 20, no. 2, March 1979 (1979-03), pages 242-246, XP001022978 ISSN: 0006-3363 the whole document</p> <p>-----</p>	1

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/NL 03/00718

### Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

#### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

## Continuation of Box I.2

The expression "precursors" used in claim 1 is vague and unclear, defining ambiguously the compounds for which protection is sought. This expression could actually also define compounds which are substantially different from the compounds for which support and disclosure is found in the application. This ambiguity leaves the reader in doubt as to the meaning of the technical features to which it refers, rendering the definition of the subject-matter of said claims unclear.

In view of the definition "estrogen-suppressed tumours" and the mention in the description that estrogen-suppressed tumors also comprise tumors stimulated by androgens, it is not possible to determine all the tumoral forms falling into this definition.

The search has been restricted to the compounds defined in the Markush formula in claim 1, the precursors defined in claim 5, in relation to the treatment of the tumoral forms for which a clear support and disclosure is present in the application (prostatic and colon cancer).

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

## INTERNATIONAL SEARCH REPORT

 Internal Application No  
 PCT/NL 03/00718

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5340585	A	23-08-1994	US 5211952 A AT 245992 T CA 2162261 A1 DE 69432990 D1 DK 748190 T3 EP 0748190 A1 NO 954611 A WO 9426207 A1 AT 158717 T CA 2084891 A1 DE 69222500 D1 DE 69222500 T2 DK 538443 T3 EP 0538443 A1 ES 2109995 T3 FI 925652 A NO 924755 A US 5340586 A WO 9218107 A1 US 5340584 A	18-05-1993 15-08-2003 24-11-1994 04-09-2003 27-10-2003 18-12-1996 16-01-1996 24-11-1994 15-10-1997 13-10-1992 06-11-1997 05-02-1998 14-04-1998 28-04-1993 01-02-1998 11-12-1992 09-02-1993 23-08-1994 29-10-1992 23-08-1994
WO 9426207	A	24-11-1994	US 5340585 A AT 245992 T CA 2162261 A1 DE 69432990 D1 DK 748190 T3 EP 0748190 A1 NO 954611 A WO 9426207 A1	23-08-1994 15-08-2003 24-11-1994 04-09-2003 27-10-2003 18-12-1996 16-01-1996 24-11-1994
US 5340584	A	23-08-1994	US 5211952 A US 5340586 A DE 69222500 D1 DE 69222500 T2 EP 0538443 A1 FI 925652 A NO 924755 A AT 158717 T CA 2084891 A1 DK 538443 T3 ES 2109995 T3 US 5340585 A WO 9218107 A1	18-05-1993 23-08-1994 06-11-1997 05-02-1998 28-04-1993 11-12-1992 09-02-1993 15-10-1997 13-10-1992 14-04-1998 01-02-1998 23-08-1994 29-10-1992
US 2003203933	A1	30-10-2003	WO 03088927 A2	30-10-2003
WO 0132683	A	10-05-2001	WO 0132683 A1 AU 1021300 A CA 2389666 A1 EP 1228084 A1 JP 2003513103 T NO 20022093 A US 6677453 B1	10-05-2001 14-05-2001 10-05-2001 07-08-2002 08-04-2003 03-06-2002 13-01-2004
WO 9309771	A	27-05-1993	US 5162117 A AU 3057492 A EP 0543541 A1 WO 9309771 A1	10-11-1992 15-06-1993 26-05-1993 27-05-1993

# INTERNATIONAL SEARCH REPORT

Internat plication No  
PCT/NL 03/00718

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 1120114	A	01-08-2001	AU 1367601 A CA 2331053 A1 EP 1120114 A2 HU 0100120 A2 JP 2001213776 A NZ 509321 A US 2001041718 A1 ZA 200100177 A	19-07-2001 12-07-2001 01-08-2001 28-10-2002 07-08-2001 25-10-2002 15-11-2001 08-07-2002
US 4937238	A	26-06-1990	EP 0240717 A2	14-10-1987
US 5468736	A	21-11-1995	AT 202281 T AU 680239 B2 AU 6245494 A BG 62383 B1 BG 99880 A BR 9406667 A CA 2157003 A1 CZ 9502048 A3 DE 69427529 D1 DE 69427529 T2 DK 686037 T3 EP 0686037 A1 ES 2159552 T3 FI 953926 A GR 3036649 T3 HU 72080 A2 JP 3441459 B2 JP 8510993 T KR 248857 B1 NO 953243 A NZ 262657 A PL 310660 A1 PT 686037 T RO 115115 B1 RU 2139056 C1 SK 104995 A3 WO 9418983 A1	15-07-2001 24-07-1997 14-09-1994 29-10-1999 29-02-1996 23-01-1996 01-09-1994 13-03-1996 26-07-2001 22-11-2001 27-08-2001 13-12-1995 16-10-2001 22-08-1995 31-12-2001 28-03-1996 02-09-2003 19-11-1996 01-04-2000 17-08-1995 26-05-1997 27-12-1995 28-09-2001 30-11-1999 10-10-1999 09-04-1997 01-09-1994